

Volunteer Audio

Glossary

A

Aftermarket – Designates audio components produced by manufacturers other than the OEMs designed to replace and/or upgrade those installed in a vehicle when it was first placed on the market.

Amperage – A unit of electrical current; the force through which the energy is pushed through a conductor. Measured in Amperes (“Amps” for short); Ohm’s Law symbol for Amperes is “I”.

Ampere – The unit of measurement used to determine the quantity of electricity flowing through a circuit. One ampere flows through a 1 Ohm resistance when a potential 1 Volt is applied.

Amplifier – In the simplest of terms, a device that increases the power of an electrical signal. Receivers have low-powered amplifiers built in. Larger amplifiers are mounted away from the head unit typically in a trunk or under a seat. Also (informally) **Amp**.

Adapters – General term for devices used to make aftermarket audio components compatible to the numerous vehicles produced by various manufacturers. Wire harnesses, antenna adapters, and speaker adapters are the most common examples.

B

C

CAN bus – “A Controller Area Network (**CAN bus**) is a vehicle bus standard designed to allow microcontrollers and devices to communicate with each other in applications without a host computer.” – *Wikipedia*
CANbus networks became common in cars built after 1995. In most cases, if your factory head unit uses CANbus to interact with other components of the car (such as steering wheel controls or amplifiers) you will, need an interface in the aftermarket wiring harness. Unfortunately, it is difficult to determine if a specific vehicle’s audio system uses CANbus due to the many variables in configuration. A wiring diagram showing data wires is the most helpful tool to determine in advance if a system uses CANbus, but often the head unit must be removed to verify exactly how a particular system works.

Current – The rate of electrical or electron flow through a conductor between objects of opposite charge. The symbol is “I” or “A”, measured in Amperes of “Amps”.

Crimp connector – Insulated wire connector affixed to the wire using a special crimping tool. Butt connectors (end-to-end) are the most commonly used type in audio installations.

Coaxial speaker – A loudspeaker driver with two or more combined concentric drivers.

D

Dash Kit – An adapter designed to fit the standardized dimensions of an aftermarket radio to the dash of a particular vehicle.

E

F

Full-range speaker – A loudspeaker drive unit that is defined as a driver that reproduces as much of the audible frequency range as possible, within the limitations imposed by the physical constraints of a specific design.

G

Ground – The term given to anything that has an electrical potential of zero. Most modern vehicles are designed around a negative ground system, with the metal frame being the vehicle’s ground (electrically also called “chassis” or “chassis ground.”)

Ground loop – The term given to the condition that occurs when a voltage potential exists between two separate points.

H

Head unit – The in-dash control center of a vehicle audio system. Head units typically include a low-powered internal Amp, AM/FM tuner, and/or a CD player as minimum features. “Head unit” is often used interchangeably with receiver, radio, and stereo.

I

Interface – A modular electronic device that allows OE electronic features of a vehicle to work with an aftermarket audio system.

J

K

L

Loudspeakers – Transducers (known as “drivers”) that convert electromagnetic waves into sound waves. Also, (short form) **Speaker**.

M

Mid-range speaker – A loudspeaker driver that reproduces mid-range audio frequencies.

N

O

OE – Original Equipment

OEM – Original Equipment Manufacturer

Ohm – The unit of measurement for electrical resistance.

Ohm’s Law – The statement of the relationship between current, voltage, and resistance. Where I = Current, E = Voltage, and R = Resistance, $I=E/R$, $E=I \times R$, and $R=E/I$.

P

Q

R

Receiver – A device used to receive a signal or command from a source such as a transmitter.

S

Stereo – Short form of “stereophonic” referring to two or more audio channels during recording or playback that gives a more natural distribution of sound. The term is often used interchangeably for a receiver that reproduces stereophonic sound.

Subwoofer – A woofer driver made specifically for the lowest part of the audio spectrum: typically below 125 Hz. Also, (informally), **Sub**.

T

Tuner – An electronic component, or a separate device, that receives radio frequency transmission signals (such as AM, FM, or SiriusXM) and converts a selected signal to a fixed frequency for further processing.

Tweeter – A small, high frequency loudspeaker driver that reproduces the highest frequencies in a speaker system.

U

V

Volt – The term used to refer to the property of electrical pressure through a circuit. Car audio equipment operates at 12 volts.

Voltage – The electrical pressure required to do electrical work. Voltage is also called potential. Voltage must be present for electrical current to flow within a closed circuit.

W

Watt – The basic practical unit of measure for electrical or acoustic power.

Wattage – Electrical power.

Watt's Law – Similar to Ohm's Law, it demonstrates the relationship between Voltage (E) and Current (I) to represent a quantity of Power (P). With the Watt's Law formula, knowing two elements can mathematically compute the third element.

Wire harness – Sets of wires fixed to a plug used to connect audio devices. A receiver is shipped with a harness that is then matched to a vehicle-specific adapter harness to connect the new head unit to the OE vehicle harness, usually with no wire cutting required. Similarly, a speaker harness has a plug with two wires that will adapt an aftermarket speaker to a particular make of vehicle so that the OE wiring does not have to be cut.

Woofer – A large loudspeaker driver that reproduces low frequencies. A standard woofer is a versatile speaker that produces sounds between 20 and 2,000 Hz. There are several types of woofers each designed to better reproduce a more limited range of the low frequencies.

X



Y



Z

